U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

DOE Solid-State Lighting Market Introduction Workshop

Welcome

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Why Are We Here?



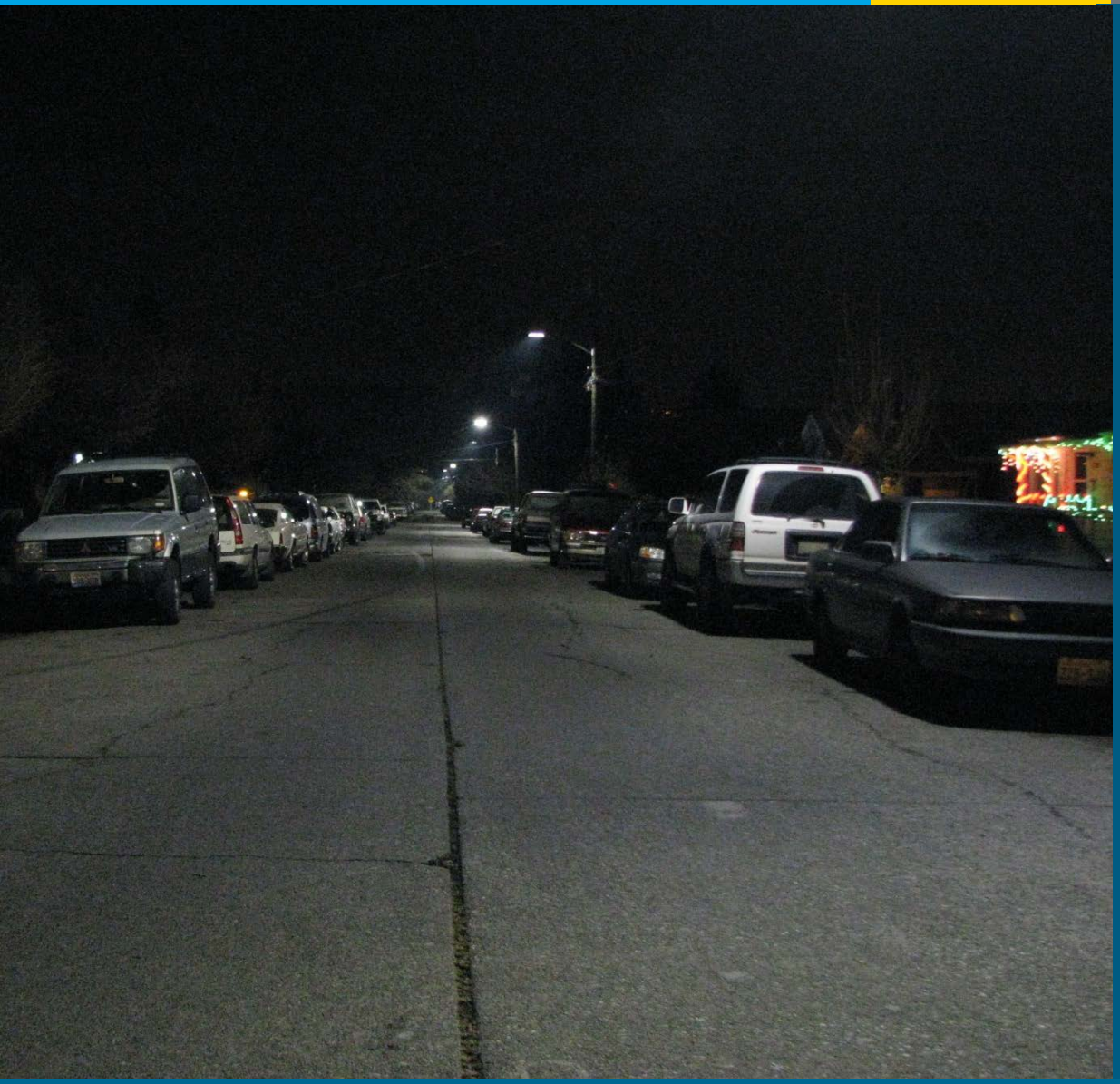
- ☑ A. Ride the coasters at Kennywood
- ☑ B. Sample famous Primanti Bros. sandwich
- ☑ C. Sample local brew
- ☑ D. Learn, share, participate

Market Moving at Warp Speed

- Product performance increasing rapidly
- Prices falling
- SSL products: viable, cost-effective options in a growing number of lighting applications

So what's the problem?

The View from One City…



Product Price (2500 units)	
Fall 2009	$369
Spring 2010	$289
Fall 2011	$239

The View from One Retailer…

A19 lamps	Highest output	Best color rendering
July 2010	350 lumens	82 CRI
July 2011	810 lumens	90 CRI

The View from One Installation

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Compatibility Is Key

Improperly matched dimmers, drivers, and LED sources can have unintended consequences…

Questions Remain

- Solid-state lighting is fundamentally different from incumbent lighting technologies
- Not a one-for-one replacement solution
- Performance characteristics can be quite different
  - Lifetime, lumen maintenance, dimming, color maintenance, reliability, flicker, color quality
- Installation needs can be quite different

So what can DOE do to make the transition less problematic, less risky, and more successful?

Resources and Tools

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Mix of Perspectives

- Rich mix of perspectives from industry experts on key issues and trends
  - Product prices and cost effectiveness
  - Reliability and lifetime: LED device plus other components
  - Lessons learned from city planners, utilities, facility managers, lighting showrooms, electrical contractors
  - Dimming, color quality, equivalency
- DOE workshops: A crossroad for collaboration

Acuity Brands Lighting • Canaccord Genuity • City of Boston
City of Chattanooga • City of Philadelphia • Colliers International
Efficiency Vermont • Energy Trust of Oregon • Grainger • Gross Electric
Legacy Health • Leviton Manufacturing • Mark Schulkamp Electric
NEXT Lighting • Platinum Lighting Concepts • Philips Lighting
RNM Engineering • RTI International • Seattle City Light
Southern California Edison • Strategies Unlimited • Target • The Home Depot

Collaboration Is Key

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National leadership to accelerate R&D, market introduction

Illuminating Engineering Society

Collaborate on strong lighting standards

IALD

Improve lighting quality and energy efficiency

NGLIA
NEXT GENERATION LIGHTING INDUSTRY ALLIANCE

Enhance manufacturing and commercialization focus

Research

More than 200 research partners, focused on core technology research and product development

Standards

Collaboration with IES, ANSI, NEMA, NIST, UL, CSA, IEC

Utilities & Efficiency Organizations

More than 30 partners, collaborating on L Prize, LED Lighting Facts, GATEWAY demonstrations, TINSSL

Designers

More than 45 lighting designers, participating in roundtables, design competitions, GATEWAY demonstrations, LED Lighting Facts

The Challenge for This Group

- Learn, share, participate over the next two days
- What is working?
- What is missing?
- What else should we be doing?


It’s light, Jim,
but not as we know it.